REMARKS

1. Claim status.

Claims 1-3, 5-6, and 10-29 are pending and allowable. Claims 4, 7-9, and 31 are cancelled. Claims 30 and 32 are under final rejection. By this response it is proposed to amend the two rejected claims. In both claims, the word "image" has been added to further emphasize that the claimed metrology technique is an imaging one. Support for this term appears at page 14, paragraph [072] of the Specification where the term "Digital Sectioning" is defined as:

> "...any process which determines the height variation of a sample by acquiring multiple two dimensional *images* in a planes or tangent planes perpendicular to the height variations of the sample, each with depth of field less than or equal to the spacing of the *images* planes, and reconstructs the three dimensional sample profile by combining these *images*." (emphasis added)

2. 35 U.S.C. 102(e) Rejection.

Claims 30, and 32 stand rejected under U.S.C. 102(e) as being anticipated by Singer (US Patent No. 6,829,207 B1).

Applicant kindly requests entry of this amendment and reconsideration of the rejection.

The rejected claims now recite that imaging of a modulated groove is achieved by digital image sectioning. Nowhere in Singer is it taught (or even suggested) to use digital image sectioning, as defined in the instant application, for reconstructing (i.e. extracting an audio signal from) a mechanical recording.

The Examiner has relied upon statements in Singer, at Col 4, lines 23-30, as supporting the assertion that Singer teaches such an approach. That referenced section states:

"Resolving the Groove Cross Sectionally

> The resolution across a cross section of the groove 2 would have to be determined experimentally. At least a few data points 34 would be required. In one embodiment illustrated in FIG. 2, ten data points 34 may be taken across a cross section of the groove (more or less may be taken). Assuming the groove measures two mils across (50 microns), the resolution required would be 5 microns."

Taking this section in context, it deals, and then only at the conceptual level, with the number of data points required to achieve the desired level of resolution to make a successful mapping of a phonograph record (Col 4, lines 31-33). Taking into account the paragraphs preceding (Col 4, lines 10-20) and following (Col 4, lines 31-48), it is clear that the noted section constitutes nothing more than a general discussion and is not specific to or indicative of any particular measurement method.

Not until Col 4, line 49 does Singer begin to discuss the means by which grooves can be measured to obtain the necessary data points. Singer's *preferred* approach is to acquire these data points using mechanical instruments (Col 5, lines 18-30). As examples of acceptable mechanical approaches, he cites the use of commercially available CMMs (Coordinate Measuring Machines), and multiple point instruments having multiple measuring probes (Col 5, lines 17-49).

The one non-mechanical approach described by Singer is limited to the use of a scanning white light interferometer (SWLI). Though Singer in principal notes that SWLI has the accuracy to make the required measurements, he states that such an approach is *not preferred* because measurement times are too slow, e.g. 311 hours to recover 1 minute of sound (Col. 4. lines 59-67).

Digital image sectioning and white light interferometry [also defined in the instant application at paragraph 071] are separate and distinct technologies. In the latter case, a white

light beam is split, one portion of the split beam reflected off a mirror and the other portion of the beam reflected off the surface under examination. The split beams are then recombined and the *interference patterns* observed. In this manner, by determining the point of maximum intensity as the sample is moved, the depth of each point on the surface may be inferred. On the other hand, in digital sectioning, multiple 2-D *images* of a groove are taken, and these *images* then combined to create a 3-D profile. The teaching of the one methodology is not a teaching of, or a suggestion regarding the utility of using the other methodology.

CONCLUSION

Singer fails to teach the use of digital image sectioning as means for extracting an audio signal from a mechanical recording. In fact, he teaches away from the use of optical imaging techniques, favoring mechanical approaches instead. Singer neither anticipates the invention as now claimed, nor suggests the same. Accordingly, Applicant submits that claims 30 and 32 as proposed are allowable, and requests all claims in the application be allowed, and the case passed to issuance.

3. Claims Fees.

There is no additional claim fee, as no claims have been added.

If additional fees are required for the filing of these documents, the Commissioner for Patents is hereby authorized to charge or credit an overpayment to Deposit Account No. 120690.

If there are any questions, the Examiner is requested to contact Lawrence Edelman, < LEdelman@lbl.gov> at (510)486-6503), the attorney now handling this matter on behalf of Applicant.

Respectfully submitted,

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